

Habitat Objectives for Greater Sage-Grouse

(See Map 3-4 for the Wasatch, Low, and Parker Habitat Clusters)

The habitat objectives for GRSG (Table 2-2) is a list of indicators, characteristics, and values that describe GRSG seasonal habitat use areas. The BLM used indicator values derived from a synthesis of local and regional GRSG habitat research and data to describe the typical vegetation communities that sage-grouse select. While the habitat objectives are not attainable on every site or every acre within designated GRSG habitat management areas, the values reflect a range of habitat conditions that generally lead to greater survival of individuals within a population. When permitting land use activities, BLM should consider the ecological site potential within designated habitat management areas to validate the habitat conditions achievable for a specific site. In addition, areas where PHMA and GHMA overlap mapped Utah prairie dog habitat will be managed for both species; accomplishing this shall include coordination with species specific experts to develop conservation and recovery objectives that will benefit both species.

The seasonal habitat descriptions in Table 2-2 vary across the range of sage-grouse, within a subregion, and between sites. They are not land health standards but are quantitative measures that inform the Special Status Species Habitat Land Health Standard for sage-grouse. These measurable values reflect ecological potential, and may be adjusted based on local factors influencing sage-grouse habitat selection. Local data or recent science may indicate that sage-grouse select for vegetation structure and composition in seasonal habitats not characterized by the values in the habitat objectives table. In these cases, it may be appropriate to adjust the values. Habitat objectives should be evaluated in the context of annual variability in ecological conditions and should not be used singly to determine habitat suitability for sage-grouse. They may be used to demonstrate trends over time, during plan evaluations for effectiveness of sage-grouse conservation, or when identify limiting habitat characteristics for a given area.

The indicators, characteristics, values and desired seasonal habitat conditions in the GRSG Plan Habitat Objectives Table are meant to inform the wildlife habitat component of the Land Health Standards evaluation process (LHS, 43 CFR 4180.2), but do not replace rangeland health assessments. Results from the LHS evaluation should be used to support BLM in land use authorization processes and during development of objectives for management actions such as vegetation treatments. BLM land use authorizations will contain terms and conditions regarding the actions needed to achieve or make progress toward achieving habitat objectives and land health standards.

The Habitat Objectives Tables are to be used:

- To assess habitat suitability for sage-grouse following the BLM policy on sage-grouse habitat assessments
- To evaluate land use plan effectiveness for sage-grouse conservation, and
- As a basis to develop measurable project objectives for actions in BLM-designated GRSG Habitat Management areas when considered alongside land health standards, ecological potential and local information.

ATTRIBUTE	INDICATORS	DESIRED CONDITION
Breeding and Nesting (February 15-June 15)^{1, 2, 3, 4, 5, 6}		
Lek Security	Proximity to conifers	Conifers are absent or uncommon on shrub/grassland ecological sites within 1.8 miles (approx. 3 kilometers) of occupied leks. ^{6, 7, 8}
	Proximity of sagebrush to leks	Has adjacent sagebrush cover. ⁶
Cover	% of seasonal habitat meeting desired conditions	>80% of the mapped nesting habitat meets the recommended vegetation characteristics, where appropriate (relative to ecological site potential, etc.). ⁸
	Sagebrush cover ⁹	Wasatch: ≥14% Low: ≥ 7% Parker: ≥ 17%
	Total shrub cover ^{6, 8, 9}	Wasatch: ≥19% Low: ≥ 17% Parker: ≥ 22%
	Sagebrush Composition ⁹	Wasatch: ≥83% Low: ≥ 36% Parker: ≥ 71%

ATTRIBUTE	INDICATORS	DESIRED CONDITION
	Sagebrush height ^{6, 8, 9}	Wasatch: ≥ 8.7 inches (22 cm) Low: ≥ 12 inches (30 cm) Parker: ≥ 5.5 inches (14 cm)
	Perennial grass cover (such as native bunchgrasses, rhizomatous grasses called for on applicable ecological site descriptions, or other perennial grasses that provide similar functionality) ^{6, 8, 9}	Wasatch: ≥ 8% Low: ≥ 5% Parker: ≥ 4%
	Perennial grass and forb height (includes residual grasses) ^{6, 8, 9}	Provide overhead and lateral concealment from predators. ¹¹
	Perennial forb canopy cover ^{6, 8, 9}	Wasatch: ≥ 4% Low: ≥ 2% Parker: ≥ 1%
Brood-Rearing/Summer (April 15-August 15)¹		
Cover	% of Seasonal habitat meeting desired condition	>40% of the mapped brood-rearing/summer habitat meets recommended habitat characteristics where appropriate (relative to ecological site potential, etc.) ⁸
	Sagebrush cover ^{6, 8, 9}	Wasatch: ≥ 17% Low: ≥ 4% Parker: ≥ 16%
	Total shrub cover ^{6, 8, 9}	Wasatch: ≥ 15% Low: ≥ 10% Parker: ≥ 19%
	Sagebrush Composition ⁹	Wasatch: ≥ 77% Low: ≥ 28% Parker: ≥ 7%
	Sagebrush height ^{6, 8, 9}	Wasatch: ≥ 8 inches (20 cm) Low: ≥ 10.25 inches (26 cm) Parker: ≥ 4.3 inches (11 cm)
	Perennial grass cover ⁹	Wasatch: ≥ 8% Low: ≥ 5% Parker: ≥ 6%
	Perennial forb cover ⁹	Wasatch: ≥ 6% Low: ≥ 2% Parker: ≥ 2%
	Riparian areas/mesic meadows	Proper Functioning Condition
	Upland and riparian perennial forb availability	Preferred forbs are common with several preferred species present ^{6, 12}
Winter (November 15-March 15)¹		
Cover and Food	% of seasonal habitat meeting desired conditions	>80% of the mapped wintering habitat meets winter habitat characteristics where appropriate (relative to ecological site, etc.). ⁸
	Sagebrush cover above snow ^{6, 8,}	>10%
	Sagebrush height ⁹	Wasatch: ≥ 8.7 inches (22 cm) Low: ≥ 12 inches (30 cm) Parker: ≥ 5.5 inches (14 cm)

¹ Specific dates will be based on site-specific conditions and may be modified due to documented local variations (e.g., higher/lower elevations) or annual climactic fluctuations (e.g., early/late spring, and long and/or heavy winter), in coordination with the appropriate State of Utah agency,² Utah Greater Sage-Grouse Working Group 2013,³ Doherty 2008,⁴ Doherty et al. 2010,⁵ Holloran and Anderson 2005,⁶ Stiver et al. 2015,⁷ Baruch-Mordo et al. 2013

⁸ Connelly et al. 2000,⁹ Dahlgren, D., T. A. Messmer, B. A. Crabb, M. T. Kohl, S. N. Frey, E. Thacker, R. T. Larsen, and R. J. Baxter. (In Review). An empirical approach to refining greater sage-grouse (*Centrocercus urophasianus*) breeding habitat guidelines. Ecosphere.,¹¹ Specific height requirements needed to meet the objective will be set at the time of watershed assessments.,¹² Preferred forbs are listed in Stiver et al. 2015. Overall total forb cover may be greater than that of preferred forb cover since not all forb species are listed as preferred.